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ABSTRACT

This census population study surveyed 147 occupational safety and health professionals employed by the Ohio Division of Safety and Hygiene to determine how they satisfy their work-related information needs. The study achieved a response rate of 81% (n=120). Respondents were asked to identify the information providers whom they had consulted in a recent major decision or planning situation. Variables studied included information providers used, levels of satisfaction with providers, barriers to accessing information, and demographic variables. Respondents were also surveyed on their reason for use and non-use of the Bureau of Workers Compensation, Division of Safety and Hygiene Library• (BWC Library). The study identifies the information-seeking behaviors of Division safety professionals, providing insight into their concerns about the cost, quality, usefulness, and time aspects of information. Division personnel use the BWC Library extensively for their information needs, and chose library materials as one of the three most helpful information sources. Safety professionals sought information providers that were close by and familiar, whether print material or a person, and then turned to outside sources. Over 70% stated they used a most helpful source based on previous experience. Appendices include respondents' written answers and comments, cover letters, and the survey. (Contains 13 references.) (Author/SWC)

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# INFORMATION-SEEKING BEHAVIORS OF OCCUPATIONAL SAFETY AND HEALTH PROFESSIONALS: THE OHIO DIVISION OF SAFETY AND HYGIENE

A Master's Research Paper submitted to the
Kent State School of Library and Information Science
in partial fulfilment of the requirements
for the degree Master of Library Science

by

James E. Griffin

August, 1994

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Information-seeking Behaviors of Occupational Safety and Health Professionals: The Ohio Division of Safety and Hygiene

How various professions satisfy their work-related information needs is becoming an area of great interest and study according to the literature. This census population study of 147 occupational safety and health professionals employed by the Ohio Division of Safety and Hygiene is one such study. This study, is based on a similar one done by Mary Sprague which involved examing the information-seeking patterns of Ohio State University staff. Utilizing a mail survey, respondents were asked to identify the information providers which they had consulted in an important work situation. Variables studied included information providers used, levels of satisfaction with providers, barriers to accessing information, and some demographic variables. Respondents were also surveyed on their reasons for use and non-use of the Bureau of Workers Compensation, Division of Safety and Hygiene Library (BWC Library). The results have identified the information-seeking behaviors of Division safety professionals. In addition, it has provided insight into their concerns about the cost, quality, usefulness, and time aspects of information. Finally, this study revealed that Division personnel use the BWC Library extensively for their information needs.

Master's Research Paper by

James E. Griffin

B.A., The Ohio State University, 1985

M.L.S., Kent State University, 1994

Approved by

Adviser_____Date_____

## TABLE OF CONTENTS


LIST OF TABLES ..... vi

INTRODUCTION ..... 1

LITERATURE REVIEW ..... 3

OBJECTIVES AND DEFINITIONS ..... 8

- Objectives ..... 9
- Definitions ..... 9

METHODOLOGY ..... 12

- Sample ..... 12
- Survey Instrument ..... 13
- Procedures ..... 14
- Data Analysis ..... 16

RESULTS ..... 17

- Respondent Demographics ..... 17
- Information Providers ..... 18
- Most Helpful Information Providers ..... 21
- Least Helpful Information Providers ..... 23
- Reasons for Use: Most and Least Helpful Information Providers ..... 25
- Criteria in Information-Seeking ..... 27

LIBRARY USE AND NON-USE ..... 29

CONCLUSIONS ..... 36

REFERENCE LIST ..... 39

APPENDICES ..... 40

- I. "Other" Sources of Information ..... 41
- II. Most Helpful Providers: "Other" Reasons for Use ..... 42
- III. Least Helpful Providers: "Other" Reasons for Use ..... 43
- IV. "Other" Reasons for Using the BWC Library ..... 44
- V. Users' Compaints about the BWC Library ..... 45
- VI. Reasons for Not Using the BWC Library ..... 46
- VII. Respondents Comments ..... 47
- VIII. Cover Letters and Survey Form ..... 50

## LIST OF TABLES


Table ..... Page

1. Information Providers Consulted ..... 19
2. Satisfaction with Most Helpful Provider ..... 22
3. Satisfaction with Least Helpful Provider ..... 24
4. Most and Least Important Reasons for Using Providers ..... 26
5. Most and Least Important Criteria in Information Seeking ..... 28
6. Library Use by Age of Respondents ..... 29
7. Library Use by Educational Level of Respondents ..... 31
8. Library Use by Length of Employment ..... 33
9. Reasons for Library Use ..... 34
10. Reasons for Non-Use of BWC Library ..... 35

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## INTRODUCTION

Effective decision-making in any profession demands information that is current and relevant. This is certainly true of the occupational safety and health professional. The passage by Congress of the Occupational Safety and Health Act (OSHA) in 1970 has meant business and industry must comply with federal regulations that stipulate employers provide its employees with a safe workplace, free from hazards. Rapid developments in industrial technology and newer chemicals being introduced into the workplace have increased the need for qualified health and safety professionals to staff these workplace programs. In addition, public concern for health and safety issues in the workplace has increased requests for occupational safety and health information.

Occupational safety and health programs involve a diversity of disciplines including biology, health physics, industrial engineering, industrial hygiene, industrial safety, and occupational medicine. These safety programs are expanding rapidly in the United States to meet the needs of employers and employees to prevent accidents and illnesses in the workplace (LaDou 1994). One such program, the Ohio Division of Safety and Hygiene, established by the Ohio General Assembly in 1925, is a consultative workplace safety and health organization which assists Ohio employers and employees in establishing and maintaining healthier and safer workplaces.

Newly introduced products, processes, and regulations within the occupational safety field as well as technological advancements create a complex work environment for the occupational safety and health professional. A competent occupational safety and health professional must possess a knowledge of safety administration and technology, chemical toxicology, epidemiology, ergonomics, and industrial hygiene--subjects that cut across many disciplines (Olishifski 1986). This is certainly true of the Division's staff of

occupational safety and health professionals. Information on these various topics and the ability to acquire it are integral factors in the successful accomplishment of the goals of a Division of Safety & Hygiene occupational health and safety professional. The information specialist plays an important role in this process.

A knowledge of the information seeking/using behaviors of occupational safety and health professionals will enable the librarian to better understand their information needs and the perception of how these needs are to be filled (Prentice 1980). Furthermore, the Special Libraries Association (SLA) identified in its 1990 Research Agenda 'the information seeking/user behaviors of people in different professions' as a research priority because " behaviors and needs may vary from discipline to discipline" (Drake 1990). This knowledge will assist the Division's library staff as they plan and develop services for Division staff members.

The present study explored these issues to determine the information-seeking patterns of the Ohio Division of Safety and Hygiene's occupational safety and health professionals. This study is based on a survey of the information seeking behaviors of Ohio State University administrators and non-faculty professional staff done by Mary Sprague, graduate student, Kent State University, School of Library Science (Sprague 1990). The literature provided limited insight into the information needs of occupational safety and health professionals. Therefore, general use studies concerning information seeking of various professions as well as studies specific to the occupational safety and health program were examined for their relevance to the present study.

## LITERATURE REVIEW

Studies focusing on the information seeking behaviors of occupational safety and health professionals are not common, or at least not published. Varlejs provides a review of information seeking studies of libraries and information systems (Varlejs 1987). Other professionals -- engineers, chemists, geoscientists, research scientists, and business marketing staffs have been surveyed to learn how they acquire information for work-related tasks. Findings indicate that the primary source of information for these groups is one's colleagues (Bichtler 1989; Prentice, 1980; Pruett 1980; Steinke, 1991). This informal exchange of information among co-workers is invaluable. These studies also found that personal files, technical reports, and trade journals are additional sources of information. The library was not identified as a place they would consult if they needed information. Furthermore, users perceived the information specialists' skills of locating and obtaining complex, technical information as being inadequate for their needs in terms of currency, access and delivery. These were considered weaknesses of the library (Pruett 1986).

Bergland studied the information needs and behaviors of deans of occupational education programs in California's two year community colleges. The study's target population consisted of a census of 126 individuals. The deans were asked to determine which of eighteen information sources were the most useful and which ones were not. They most frequently used face to face discussions or conferences with people in their own organizations, and notes and files in their offices. Sources considered least useful were abstracts, indexes, and bibliographies; other libraries, resource centers, or information sources; textbooks and references; and libraries or resource centers in their institutions (Bergland 1987).

Halton (1987) describes a response strategy involving the collection, evaluation, presentation, and dissemination of occupational health information by information scientists and outlines the contribution and importance of information technology and information science to the area of occupational health. He discusses the need to carefully negotiate with inquiries (users) the exact nature of their questions. Halton states that the material being given to the requester be intelligible and complete. Quick access to useful information is critical, according to the author. However, the information seeking behaviors of occupational safety and health professionals as part of the information process is not discussed.

The Clearinghouse for Occupational Safety and Health Information, the technical information center for the National Institute for Occupational Safety and Health (NIOSH), OSHA's research organization, developed an internal user needs survey to assist in its resource allocations for information services. The NIOSH survey has two purposes – to identify needed information services, and to determine satisfaction with existing services (Schoenborn 1978). Satisfaction with NIOSH Clearinghouse information services was measured using a five point Likert-type scale ranging from poor to excellent. A summary table of the NIOSH information user needs questionnaire showed what types of information services were available to NIOSH researchers; which survey items were ranked; and which information sources, library services and information needs were measured using the Likert-type scale. A copy of the actual questionnaire was not available, making an evaluation of its usefulness for this study impossible.

Ching-chich Chen and Peter Hernon's 1979 research study of the information gathering behaviors of New England residents is the foundation for my research paper. The purpose of their study was to gather and analyze data

to determine 'who gets what information from where and why.' The data related the nature of the information providers (e.g. accessibility and built-in barriers) to the nature of information seekers (e.g. awareness of their own abilities and of alternate providers). Respondents were asked to describe situations in which they needed information and then to identify the information providers they consulted. Each respondent was asked to describe one work situation and one non-work situation in which information was needed. These broad situation groupings were divided into sub-situation topics for analysis (e.g. job-related technical issues, consumer issues, education issues). Respondents were also asked to evaluate the relative importance of five factors considered in deciding whether to consult a provider: cost in money; cost in time; up-to-dateness of the information; accuracy of the information; and understandability. Respondents were then asked if they did or did not use the library as an information provider.

Chen and Hernon's objectives were to identify situations in which residents sought information; to examine their perceived level of satisfaction with the information providers (with special interest in library use and non-use); and to determine the barriers to effective information seeking (Chen and Hernon 1982, 23). The data was gathered from 2,400 individuals, randomly selected for telephone interviews.

The study results showed that for both work and non-work situations, respondents relied heavily on interpersonal providers (co-workers, colleagues, self). Only 17% of the respondents identified libraries as an information source. Libraries were ranked ninth on the list of information providers. Libraries were cited as most helpful in 3% of the situations in which they were consulted and least helpful in 3% of the situations. Those providers cited as being most helpful were because of prior experience and knowledge. Proximity and access were

not considered that important. Respondents were satisfied with the relevancy and accuracy of the information provided over fifty percent of the time.

In work situations, the limited use of libraries focused on job-related technical issues. The predominant reason for non-use in work situations was that library would not be helpful or that it would not be necessary to consult one.

Accuracy and understandability were most important for all situations, especially work situations. Cost in money and time were least important for all situations. However, cost was most important in job-related technical issues. The researchers conclude that people are willing to pay for accurate, recent, understandable materials, and will not use providers that do not or cannot provide this information. Considering the perception of libraries in this study and others already discussed, it is understood why libraries are not considered a primary information source.

Chen and Hernon believe that their research findings indicate a need for more investigations of specific situations, user populations, and providers. These researchers developed the basic questions that were subsequently used in Mary Sprague's study of the information seeking patterns of Ohio State University administrators and non-faculty professional staff, the basis for this study.

Sprague's 1990 research study identified the information seeking patterns of Ohio State administrators and non-faculty professional staff members as well as their perceptions of University Libraries as an information provider in work situations. Sprague's descriptive survey utilized a ten percent proportionate stratified random sample of approximately 3,300 full-time and part-time individuals employed at the Columbus campus of the Ohio State University. A mail survey was distributed to the 330 members of the study's sample.

In the first section of Sprague's questionnaire, the respondents were asked to recall a major work or planning situation in the last six months and then identify from a list of eighteen information providers which ones they had used in this one situation. They showed a preference for interpersonal providers (e.g. colleagues) as well as convenient print material. The four most common choices, staff members, faculty members, personal print materials and departmental print materials indicated that OSU administrators and non-faculty professional staff looked first at information providers nearby. Respondents found interpersonal providers were the most helpful providers due to prior experience. They were also highly satisfied with the most helpful providers and would use them again (Sprague 1990). Respondents were not very dissatisfied with the least helpful providers (staff members; personal books, journals, newspapers; University rules and regulations; students) and would use them again for future information needs. Respondents also indicated a very clear preference for accurate, current, and understandable information. Overall, seventy percent were more concerned with understandability. The cost of the needed information was of little concern.

The second part of Sprague's survey looked at University Libraries usage and non-usage by the respondents. Eighty-five individuals (36%) reported that they used University Libraries for this one work or planning situation. However, a clear majority did not use the Libraries (63% or 149 respondents; 1% did not answer). Generally speaking, University Libraries were used by relatively young (26 to 35 years old); very well educated (62% had a graduate degree); individuals who had been employed by Ohio State for less than five years and were staff members in either an academic or research department.

The majority of respondents were library non-users. Generally they did not use University Libraries because they 'do not' or 'did not' need to. Sprague's

findings corroborated Chen and Hernon's study, that reported respondents often had not thought of libraries for their work information needs: a perceived lack of need to use libraries.

## OBJECTIVES AND DEFINITIONS

The objectives of this study paralleled those in both the Chen and Hernon and the Sprague study:

1. To identify which information providers are used by Ohio Division of Safety and Hygiene occupational safety and health professionals in work-related decision or planning situations.
2. To determine the level of satisfaction with the information providers utilized.
3. To depict the factors related to perceived satisfaction with information providers.
4. To profile users of the BWC Library in terms of gender, age, education level, and length of employment and to describe reasons for their use and non-use of the library.
5. To determine criteria used in information-seeking.

This paper presents the findings of this study. The results have identified the information-seeking patterns of Division of Safety and Hygiene occupational safety and health professionals as well as their perceptions of the BWC Library as an information provider in work situations.

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## Definitions

Information Need

Chen and Hernon's study asked respondents to describe a situation in which they needed to find the answer to a question, solve a problem, or make a decision in two recent, important situations so that the researchers could probe the information use that related to the context of need. They stated that the intent of their study was "to observe 'traces' of an information need having existed in the context of a particular situation," (Hen and Hereon 1982, 38). Similar to Sprague's study, respondents were asked to think about a major decision or planning situation at work which occurred within the past six months and for which they needed information. They were not asked to describe the situation. However, all subsequent questions reminded them to relate their answers only to the same major work situations (Sprague 1990, 15). Sprague's method of defining information need was used in this study.

Occupational safety and health professional

> This definition comes from Dictionary of Terms Used in the Safety Profession. American Society of Safety Engineers. 3rd ed. 1988.
>
> An individual who, by virtue of specialized knowledge and skill and/or educational accomplishments has achieved professional status in the safety field. He/she may have earned the status of Certified Safety Professional (CSP) from the Board of Certified Safety Professionals. This occupational field is concerned with the preservation of human and material resources through systematic application of principles drawn from such disciplines as engineering, education, psychology, physiology, enforcement, hygiene, health physics, and management as well as other appropriate methods and techniques of loss prevention and loss control. Responsibilities of an occupational safety and health professional include the identification and appraisal of accident and occupational illness problems, development and application of hazard controls, communication of safety and health information, measurement of the

effectiveness of controls, and generation and use of evaluation information in program improvement.

Length of Employment

Length of employment referred to the number of years during which the respondent has been employed by the Division of Safety and Hygiene. Respondents supplied this information on the survey form by circling one of six options: 5 and under, 6-10 years, 11-15 years, 16-25 years or over 25 years.

Age and Gender

Respondents were asked to identify their present age by circling one of six categories on the survey form: 25 and under years, 26-35 years, 36-45 years, 46-55 years, 56-65 years and over 65 years.

Respondents identified their gender by circling either the "male" or "female" option.

Level of Education

Respondents were asked to identify their highest educational level. The categories included: completed high school, some college, completed college, some graduate work, and a graduate degree.

Information Provider

An information provider is any individual, publication, organization, or institution that was used by the respondents in this study to meet, or attempt to meet their information need. The survey instrument listed eighteen information providers and provided an "other" option. Respondents were asked to identify those sources they used to gather information in one, major situation.

Level of Satisfaction

The level of satisfaction referred to a respondent's attitude toward both the most helpful and the least helpful information providers cited in the survey. It was measured on a four-point scale: very satisfied, somewhat satisfied, somewhat dissatisfied, very dissatisfied.

Criteria Used in Information-Seeking

Criteria in effective information-seeking were defined as the set of factors listed below:

time
cost in money
up-to-dateness of the information
accuracy of the information
understandability of the information

Respondents were asked to identify which one of the above factors was most important and which one factor was least important as they gathered information for this one work project. In addition, the respondents were asked to determine which item in each of three paired comparisons (time and cost, cost and understandability, and cost and understandability) was more important.

## METHODOLOGY

A descriptive study of Bureau of Workers Compensation (BWC), Ohio Division of Safety and Hygiene occupational safety and health professionals was conducted to describe what information providers they used, why they used them, and how they perceived the BWC Library, the Division's library as an information provider in work situations. This information was collected from a population census sample, in other words, the entire group of Division occupational safety and health professionals was included in this study.

### Sample

The population under study consisted of 147 occupational safety and health professionals who are employed full-time by the Bureau of Workers Compensation, Ohio Division of Safety and Hygiene. These individuals are also referred to as "field personnel" because they perform the majority of their consulting work at Ohio businesses and industry or "out in the field" rather than at one of four Division regional offices located in Cleveland, Columbus, Dayton, and Toledo. This group was selected because they are the largest group within the Division who have similar responsibilities and work environments. Division clerical and secretarial employees, administrative assistants, paraprofessionals, researchers, and training staff were not included in this population and were excluded from this survey. Finally, Division management and supervisory personnel were not part of this study's population.

A list of all Division safety professionals was obtained from the Division's budget/human resources administrator. This list grouped the field personnel by their regional office and in numerical order by their Personnel Classification Number (PCN), a unique four digit number that is internally assigned by the

Bureau's Office of Human Resources. Each person's name, classification, and working title (e.g. ergonomist, industrial hygienist, construction safety consultant or industrial safety consultant) were also included.

**Survey Instrument**

The survey instrument was an adaptation of the questionnaire used in Mary Sprague's study of the information-seeking patterns of administrators and non-faculty professionals at the Ohio State University. A copy of the form is included in Appendix VII. Sprague's survey instrument was based on Chen and Hernon's study of the information-seeking behaviors of New England residents. Although the New England study was conducted as a telephone interview of respondents, this method of data collection was considered too labor intensive and expensive for Sprague's and this study. Therefore a mail survey was conducted via the United States Post Office.

The questionnaire consisted of primarily fixed items with a few open-ended questions. In the first part of the questionnaire, respondents were asked to think about a major decision or planning situation which occurred within the past six months and for which they needed information. They were presented with a list of eighteen information providers (plus an "other" category) and asked to identify which one(s) they attempted to use to gather information. After identifying the provider(s), respondents chose the most helpful and least helpful providers and selected their reasons for using them from a predefined list. Then, they rated their level of satisfaction with both the most helpful and least helpful sources on a Likert-like scale. In the second part of the questionnaire, respondents judged which of five items were most and least important in meeting their information need. Respondents then compared the relative importance of

1) time and cost in money; 2) cost in money and understandability; 3) time and understandability as factors influencing their use of information providers.

The third part of the questionnaire included questions on the use and non-use of the BWC Library, the Division of Safety and Hygiene's resource center. Respondents described why they did or did not use the BWC Library.

The final part of the questionnaire requested demographic information from the respondents including age, level of education, sex and length of employment, Respondents were then asked if there was anything else they wanted to report about how they gathered information at work or if there were any comments they wished to make which would help describe what Division staff members want from the Division's library. Many respondents took advantage of this opportunity; their comments are included in Appendix VI.

The content domain of the questionnaire was established, in part, by the Chen and Hernon instrument as well as by Sprague's instrument. The content validity of the survey instrument for this study was assured by discussions with the investigator's research advisor, Dr. Mary Kim. Sandy Newman, a Division research scientist, also reviewed the instrument. The questionnaire and cover letter were approved by Dr. Kim and Dean Rosemary DuMont. The questionnaire was also submitted to and approved by the Kent State University Human Subject Review Board.

**Procedures**

This study collected data from two sources: from the Division's human resources' personnel records and from the respondents via the survey instrument. The personnel information determined who would receive a questionnaire.

The cover letter and questionnaire were adjusted to correct problems discovered when it was submitted to Kent State's Human Subject Review Board

in April, 1993. For example, the cover letter was originally to have been printed on Kent State University letterhead. However, it was noted by the investigator's advisor that confusion had occurred among Sprague's study's field test group and it was suggested that the investigator use Division letterhead. Permission was received from Rosemary Larkins, Library Administrator, Ohio Division of Safety and Hygiene to use Division letterhead for this survey on June 23, 1993. Once the Human Subject Review Board received this information, the survey instrument was approved on June 30, 1993.

Administration of the study questionnaire began in September, 1993. Each person was assigned an identification number (the investigator choose the unique, four digit Personnel Classification Number which was included in the personnel data) which was typed on the return mail label for receipt control purposes. Each person was mailed a personalized letter which was printed on Division letterhead (see Appendix VII for the text) and which was individually signed by James Griffin, Graduate Student/Librarian. The cover letter explained the purpose of the survey, the importance of each response, the confidentiality of information, and provided information on receiving a summary of results. The 147 letters, plus questionnaires, and the stamped return envelopes were mailed on September 24, 1993. The deadline for return of the survey was Friday, October, 8, 1993. The mailing of the questionnaire to Division field personnel worked extremely well.

Initially, 87 completed questionnaires were received by the deadline. An extraordinary opportunity for a personal "second mailing" to non-respondents occurred the week of October 12, 1993. The Division of Safety and Hygiene held a three day staff development meeting in Sandusky, Ohio from October 13-15, 1993. Copies of the cover letter and blank questionnaires to hand out to non-respondents of the first mailing were brought to the staff program. In

addition, the master list of the Division's occupational safety and health professionals containing the names of non-respondents was brought to Sandusky. These individuals were asked to complete the questionnaire and return it to the researcher. As the completed surveys were given to the researcher, they were placed in a blank envelope and their participation was noted on the printout of Division field personnel who had received the initial cover letter and questionnaire three weeks ago. This face to face follow-up yielded 30 additional completed questionnaires. While attending the Division staff meeting, 4 more surveys were received in the mail.

As completed questionnaire forms were received, the researcher noted this on the printout. Data entry began after all questionnaires were received. Tabulation of the data was completed in May, 1994.

## DATA ANALYSIS

The Minitab software program was used to tabulate the data. The "Tally" and "Table" commands and subcommands were used to tabulate the descriptive statistics which have been included in this report. This analysis provided initial information on the relationships of the variables in this study.

## RESULTS

The response rate for this survey was 81 percent, or 120 respondents (One questionnaire was unusable--the respondent stated he had not been employed with the Division long enough to adequately respond.) The majority of completed questionnaires were received in response to the first request. Furthermore, the Division-wide staff meeting was an excellent opportunity for further follow-up. The excellent response rate to this survey made further follow-up unnecessary.

### Respondent Demographics

All 120 respondents provided complete demographic data. Respondents were asked their age and gender as part of the survey. Ten percent were 25 years and under year; 33 percent were 26-35 years; 32 percent were 36-45 years; 16 percent 46-55 years; 8 percent were 56-65 years; 2 percent were over 65 years old. In terms of gender, eighty percent of respondents were male and twenty percent were female.

Education level was another variable which respondents were asked to provide. Thirty four percent of all respondents had "completed college;" thirteen percent had "some graduate work;" and twenty three percent had "a graduate degree." Twenty one percent had "some college." Only nine percent cited high school as their highest level of education.

The final demographic variable concerned the respondents' length of service with the Ohio Division of Safety and Hygiene. The largest group were those who had worked five and under years: fifty four employees, or 45 percent of all respondents. Twenty two percent had worked 6-10 years; 23 percent had worked 11-15 years; 7 percent had worked 16-20 years; one percent had worked 21-25 years; and two percent had worked over twenty-five years at the Division.

## Information Providers

This study, like Sprague's research, did not utilize telephone interviews as was done in the Chen and Hernon study to collect information. Chen and Hernon were very careful not to prompt respondents with a list of information providers, although they were able to probe for clarification if a respondent provided a confusing response. (Sprague 1990, 29) The present study provided respondents with a detailed list of information providers/sources which may have affected 1) their choice of a work situation to use in completing the survey; 2) their recall of providers actually used. These differences in methodology make it difficult to compare information provider results.

Respondents were asked to think about a major decision or planning situation which occurred within the past six months and for which they needed information. They were then asked to identify all information sources used to gather information for this one situation. A list of fourteen providers followed, plus an "other" option. Respondents were also asked to identify the one provider consulted which was most helpful and the one which was least helpful in gathering information for this one situation. Table 1 presents these results in rank order.

Table 1

Information Providers Consulted

| Providers Consulted | Count | Percent % | Most Helpful % n=120 | Least Helpful % n=120 |
|---|---|---|---|---|
| Personal books, newspapers, or journals | 117 | 98% | 13% | 12% |
| Division staff members | 113 | 94% | 27% | 12% |
| Librarian | 90 | 75% | 16% | 3% |
| Regional office books, journals, newspapers | 90 | 75% | 4% | 15% |
| Books, journals, newspapers in Library | 80 | 66% | 8% | 2% |
| Conferences, seminars, workshops | 71 | 59% | 11% | 9% |
| Colleagues outside the Division | 65 | 54% | 3% | 13% |
| BWC Library data base search | 53 | 44% | 6% | 3% |
| BWC Library catalog | 46 | 38% | 2% | 3% |
| Professional society or organization | 39 | 33% | 0% | 9% |
| CD-ROM search in library | 22 | 18% | 0% | 3% |
| Search printed indexes and abstracting tools | 21 | 18% | 3% | 3% |
| Other information providers | 16 | 13% | 4% | 2% |
| Assign responsibility to others | 10 | 8% | 0% | 2% |
| Most/least helpful not identified | 2 | 2% | 3% | 6% |
| Hire a consultant | 0 | 0% | 0% | 3% |
| Total | | | 100% | 100% |

The top five providers were a mix of interpersonal and print sources. In this study, personal collections of books, newspapers or journals were the leading choice cited by 98% of all respondents. Ninety four percent of the respondents went to fellow Division staff members to obtain information. Librarians and regional office materials were both used by 75 percent of the Division's occupational safety professionals. The BWC Library's collection followed with sixty six percent of all respondents using the library's books, journals, newspapers or subject files to gather information for this one work situation. The most frequently cited external source were conferences, seminars

and/or workshops attended by respondents. Among respondents, fifty nine percent had used information from these meetings. Colleagues outside the Division of Safety and Hygiene were contacted by fifty four percent of all respondents. Chen and Hernon's results showed an overwhelming preference for interpersonal providers in all situations, including work situations. Sprague's findings concurred with Chen and Hernon: a preference for interpersonal providers, but supplemented by job-specific materials which Ohio State administrators had on hand or to which they had ready access. This study had similar results with one major exception: Division of Safety and Hygiene occupational safety and health professionals consulted a librarian in much greater numbers for this one work situation.

Six sources could be considered as library-related: Seventy five percent had contacted a librarian within the BWC Library. The same number of respondents, seventy five percent, made use of the library materials located in each of the four regional offices. The BWC Library's materials were used by 66 percent of all respondents. Forty four percent of the Division's occupational safety and health professionals requested an online search to assist in this one situation. The library's online catalog (LCS) was used by 38 percent of all respondents. Eighteen percent requested a CD-ROM search from the BWC Library. Chen and Hernon' study found that seventeen percent of respondents used the 'library.' However, their survey looked at the information needs of the general public. The majority of Sprague's respondents, sixty three percent, a well-educated more homogeneous group with a major library system at their work site, also did not use the library to gather information for this work situation.

Sixteen respondents listed an "other" provider. Computer bulletin boards, an internally developed ergonomics database, and product manufacturers were cited as examples of information providers not included on the questionnaire.

**Most Helpful Information Providers**

Respondents were asked to consider the same major situation and identify one information source as the most helpful. The results of this question are listed on Table 1. Three of the most frequently cited information providers were among the top five most helpful information providers. Interpersonal providers were regarded as being more helpful than print sources. Division staff members (27%), and a librarian (16%), were ranked as being the two most helpful information providers. Personal books, journals, or newspapers (13%), conferences, seminars, workshops (11%), and the BWC Library's collection (8%) followed as being the most helpful sources for this major work situation. Database searches performed by BWC librarians accounted for 6 percent. The remaining 19 percent were spread among six providers. Professional society or organization, CD-ROM searches, assigning responsibility to others, and hiring a consultant were never cited as most helpful providers. Sprague also found that a strong preference for interpersonal providers, with 51 percent of all respondents citing an interpersonal source. In addition, Chen and Hernon's study showed forty five percent of the New England residents interviewed preferred interpersonal providers.

Four percent of all respondents said that the Division regional offices' books, journals, newspapers and "other" information providers were most helpful providers. Colleagues outside the Division and indexing and abstracting tools were considered most helpful by three percent of the respondents. Two percent found the BWC Library catalog to be the most helpful information source.

Level of satisfaction with most helpful providers varied. Table 2 shows that thirty-two percent of the respondents selected some type of library-related provider as most helpful. BWC Library collections, BWC librarians, BWC Library database searches, and the BWC catalog were identified as being most helpful information sources by Division field personnel . Sprague found library services and librarians were cited by OSU staff as most helpful 8 percent. In Chen and Hernon's study, the library was found most helpful by three percent of all respondents.

Table 2

Satisfaction with Most Helpful Provider

| Providers Consulted | Cited By Count | Percent % n=120 | Satisfied-Percent Very n=120 | Somewhat n=120 |
|---|---|---|---|---|
| Personal books, newspapers, or journals | 16 | 13% | 63% | 37% |
| Division staff members | 32 | 27% | 66% | 19% |
| Librarian | 19 | 16% | 95% | 5% |
| Regional office books, journals, newspapers | 5 | 4% | 60% | 40% |
| Books, journals, newspapers in Library | 10 | 8% | 80% | 20% |
| Conferences, seminars, workshops | 13 | 11% | 69% | 23% |
| Colleagues outside the Division | 4 | 3% | 50% | 50% |
| BWC Library data base search | 7 | 6% | 71% | 29% |
| BWC Library catalog | 2 | 2% | 100% | 0% |
| Professional society or organization | 0 | 0% | 0% | 0% |
| CD-ROM search in library | 0 | 0% | 0% | 0% |
| Search printed indexes and abstacting tools | 3 | 3% | 67% | 33% |
| Other information providers | 5 | 4% | 80% | 20% |
| Assign responsibility to others | 0 | 0% | 0% | 0% |
| Hire a consultant | 0 | 0% | 0% | 0% |
| Most/least helpful not identified | 4 | 3% | 0% | 0% |
| Total | 120 | 100% | | |

95% of respondents were very satisfied with their experiences with BWC librarians. 80% were very satisfied with the BWC Library's collection. 71% were

very satisfied with online searches performed by BWC Library staff. In addition, eighty percent of the respondents were very satisfied with the "other" information providers that they used Respondents were less satisfied with their personal books, Division staff members, and colleagues outside the Division as information providers for this work-related decision or planning situation.

**Least Helpful Information Providers**

As table 1 illustrates, respondents were more varied in their identification of the least helpful information providers. Regional office materials were cited as least helpful by 15 percent of respondents and the personal books, newspapers, and journals of the respondents were cited by 12 percent, making these categories the least helpful print sources. Staff members were also cited by 12 percent as being least helpful. Colleagues outside the Division were least helpful for 13 percent of the respondents. 9 percent determined that conferences, seminars, workshops as well as professional societies or organizations were least helpful, rounding out the top five least helpful information providers.

Library resources were not categorized as being least helpful by many respondents. Database searches performed by BWC librarians were cited by five percent as least helpful. Librarians, printed indexes & abstracting tools, and CD-ROM searches were each considered least helpful by three percent of all respondents. The BWC catalog (LCS) was least helpful to 2 percent of respondents. Chen and Hernon study indicated that 44% of the least helpful providers were of an interpersonal nature. Sprague's study found that 32 percent of the least helpful providers were interpersonal (staff, faculty, colleagues, outside Ohio State and students). This study's results indicated that

39 percent were print sources--regional office materials and personal books, journals and newspapers.

Level of satisfaction with least helpful providers also varied. Five percent were very satisfied, 32 percent were somewhat satisfied, 46 percent were somewhat dissatisfied, 16 percent were very dissatisfied, and eight percent did not respond to this question. The fact that 73 percent would use the least helpful source for future information needs, suggests that respondents were not very displeased with the least helpful sources. (It might also suggest that alternative sources were not available or accessible.) Moreover, Sprague found similar results--76 percent of her respondents would use the least helpful source again. Table 3 describes the level of satisfaction for least helpful providers.

Table 3

Satisfaction with Least Helpful Provider

| Providers Consulted | Cited By Count | Percent % n=120 | Satisfied-Percent Very n=120 | Satisfied-Percent Somewhat n=120 | Dissatisfied-Percent Very n=120 | Dissatisfied-Percent Somewhat n=120 |
|---|---|---|---|---|---|---|
| Personal books, newspapers, or journals | 14 | 12% | 0% | 29% | 14% | 43% |
| Division staff members | 14 | 12% | 0% | 7% | 0% | 64% |
| Librarian | 4 | 3% | 25% | 0% | 50% | 0% |
| Regional office books, journals, newspaper | 18 | 15% | 0% | 39% | 17% | 44% |
| Books, journals, newspapers in Library | 2 | 2% | 50% | 0% | 0% | 50% |
| Conferences, seminars, workshops | 11 | 9% | 0% | 27% | 90% | 64% |
| Colleagues outside the Division | 16 | 13% | 0% | 100% | 13% | 44% |
| BWC Library data base search | 5 | 4% | 20% | 60% | 0% | 40% |
| BWC Library catalog | 3 | 3% | 0% | 0% | 0% | 67% |
| Professional society or organization | 11 | 9% | 0% | 27% | 0% | 64% |
| CD-ROM search in library | 4 | 3% | 25% | 75% | 0% | 50% |
| Search printed indexes and abstacting tools | 4 | 3% | 0% | 25% | 0% | 75% |
| Other information providers | 2 | 2% | 0% | 50% | 0% | 50% |
| Assign responsibility to others | 2 | 2% | 0% | 0% | 0% | 100% |
| Hire a consultant | 4 | 3% | 0% | 0% | 100% | 0% |
| Most/least helpful not identified | 6 | 5% | 0% | 17% | 0% | 0% |
| Total | 120 | 100% | | | | |

Several information providers which were cited as least helpful were perceived as highly unsatisfactory. All respondents who had contacted a private consultant were very dissatisfied. In addition, all respondents who had assigned the responsibility to others were somewhat dissatisfied with the results. Seventy-five percent who used abstracting and indexing tools found them to be somewhat dissatisfactory. Sixty-seven percent were somewhat dissatisfied with their use of the BWC catalog for this one situation. Sixty-four percent of the respondents stated they were somewhat dissatisfied with other Division staff members. Although only four Division occupational safety and health professionals cited librarians as being least helpful, fifty percent identified their experience as very dissatisfied. Since very few respondents identified library resources as least helpful, it is difficult to analyze the level of satisfaction with such small numbers.

**Reasons for Use: Most and Least Helpful Providers**

After identifying the most and least helpful providers, respondents were asked why they had used them. Responses to this question are summarized in Table 4. A detailed listing of responses in the "other" category is included in Appendices II and III. Seventy-three percent answered that prior experience or knowledge led them to the most helpful source. This finding applied for all most helpful sources. The only exception was regional office materials. Although 75 percent of the respondents used them, only four percent considered this information provider most helpful. Seventy five percent were very satisfied with the most helpful source. Twenty-three percent were somewhat satisfied with the most helpful source. The remaining two percent did not state their level of

satisfaction with the most helpful source. Ninety-eight percent of the respondents reported that they would go back to the most helpful provider for future information needs.

Table 4

Most and Least Important Reasons for Using Providers

| Reasons | Most Helpful Count | Most Helpful Percent % | Least Helpful Count | Least Helpful Percent % |
|---|---|---|---|---|
| You were referred | 7 | 6% | 17 | 14% |
| Prior experience or knowledge | 88 | 73% | 27 | 23% |
| It was nearby and easy to get to | 16 | 13% | 37 | 31% |
| It just happened to be there | 0 | 0% | 24 | 20% |
| Other | 7 | 6% | 10 | 8% |
| No response | 4 | 3% | 5 | 4% |
| Total | 120 | 100% | 120 | 100% |

Respondents' reasons for using least helpful providers were more varied. While prior knowledge or experience remained important, proximity and happenstance were also important considerations. Thirty one percent of the respondents stated that having the information provider nearby was why they had chosen the least helpful information source. 20 percent explained that the least helpful source "just happened to be there." Fourteen percent were referred

to the least helpful source in this study. Sprague reported nineteen percent referrals and Chen and Hernon found twenty percent reliance on referrals in work situations. Nine respondents answered with an "other" reason for selecting their least helpful source. "I wanted another perspective (colleague);" ...thought individuals would be helpful (staff members);" "...it was a reference source;" are examples of "other" comments regarding the least useful provider.

**Criteria in Information Seeking**

In the second part of the questionnaire, respondents were asked which of five "criteria used in information-seeking" had been most and least important to them as they had gathered information for this situation. The following preselected criteria were examined: time, cost in money, up-to-dateness of the information, accuracy of the information, and understandability of the information. Table 5 summarizes these results. Accuracy and up-to-dateness of information were cited as the most important criteria. When the criteria were examined on the basis of which provider was identified as most helpful, these two criteria predominated. When asked to compare time, cost, and understandability, 91 percent of the respondents said understandibility was more important than cost in money. Again, understandability was ranked as more important than time--73 percent versus 27 percent for time. Time was selected over cost by 87 percent of the respondents.

Table 5

Most and Least Important Criteria in Information Seeking

| Criteria | Most Important Count | Most Important Percent % | Least Important Count | Least Important Percent % |
|---|---|---|---|---|
| Time | 13 | 11% | 30 | 25% |
| Cost in Money | 0 | 0% | 80 | 67% |
| Up-to-dateness of information | 31 | 26% | 4 | 3% |
| Accuracy of the information | 61 | 51% | 1 | 1% |
| Understandability | 15 | 13% | 4 | 3% |
| Unable/unwilling to choose | 0 | 0% | 1 | 1% |
| Total | 120 | 100% | 120 | 100% |

As in Sprague's study, a major difference exists in the importance of up-to-dateness of information. Chen and Hernon ranked it fourth most important in work situations, while respondents in this study (26 percent) and Sprague's study (22 percent), rated it as second most important. Chen and Hernon surveyed a broader range of occupations while Sprague and this present study sampled from specific occupational groups at their place of work. Cost in money was not considered important at all in this study. In the Chen and Hernon study, cost in money was the least important consideration, followed by time. Sprague's findings were similar. Accuracy of information is the most important consideration in gathering information for work situations in this study. This confirmed the findings by Sprague and Chen and Hernon. Finally, there were no

differences among sources when criteria were examined on the basis of which provider was identified as most helpful.

### Library Use and Non-Use

Eighty-three respondents (69%) reported that they used the BWC Library in gathering information in the same work situations which they had thought of at the beginning of the questionnaire. An analysis of users by demographic information revealed few variations in use of the BWC Library. Tables 6, 7, and 8 summarize the results. Clearly a majority of Division safety professionals utilized the library.

Table 6

Library Users By Age of Respondents

| Criteria | Library Users Percent % n=83 | Respondents Percent % n=120 |
|---|---|---|
| 25 and under | 10% | 10% |
| 26-35 years | 37% | 33% |
| 36-45 years | 35% | 32% |
| 46-55 years | 11% | 16% |
| 56-65 years | 7% | 8% |
| Over 65 years | 0% | 2% |
| Total | 100% | 100% |

There was little variation found between the age of the respondents and their usage of the BWC Library. The 26-35 years age group was the largest in the population sample and were the highest group of library users. They made up 33 percent of the sample and 37 percent of library users. Sprague found that this age group were users of the OSU Libraries out of proportion with their representation in the sample. (They were 53 percent of the University Libraries users and made up 35 percent of the total respondents.)

Table 7 indicates again virtually no variation between educational level and library usage. In fact, the percentage of library users paralleled the total percentage of respondents for each group. The largest segment of the study were college graduates. This group was also the largest group of library users. Sprague found that respondents with graduate degrees were the largest segment of the sample and accounted for the largest amount of library use. In addition, Chen and Hernon found that "after college" education was related to increased use of the libraries.

Table 7

Library Use By Educational Level of Respondent

| Total<br>Educational Level | Library Users<br>Percent %<br>n=83 | Respondents<br>Percent %<br>n=120 |
|---|---|---|
| Completed High School | 7% | 9% |
| Some college | 18% | 21% |
| Completed college | 34% | 34% |
| Some graduate work | 16% | 13% |
| A graduate degree | 25% | 23% |
| Total | 100% | 100% |

Division safety professionals who have been with Safety and Hygiene five years or under were the largest group of library users. As shown in Table 8, they also represented the largest group in the sample. The typical Division safety professional who used the BWC Library appeared to be relatively young, well educated (75 percent had completed college), and had been employed by the Division of Safety and Hygiene ten years or less. While field personnel with 16 years of service constituted only 11 percent of the library users, still 76 percent of this group were library users.

Table 8

Library Use By Length of Employment

| Total<br>Division Employment | Library Users Percent % n=83 | Respondents Percent % n=120 |
|---|---|---|
| 5 and under years | 46% | 45% |
| 6-10 years | 25% | 23% |
| 11-15 years | 18% | 23% |
| 16-20 years | 10% | 7% |
| 21-25 years | 0% | 1% |
| Over 25 years | 1% | 2% |

Finally, library usage by gender mirrored the demographics of the population. Females represented twenty percent (n=24) of the total sample and 20% (n=17) of BWC Library users. Males comprised eighty percent (n=96) of the total sample and 80% (n=66) of the library users in this study.

The reasons for using the BWC Library were explored by presenting library users with a list of six categories, plus an "other" category. Users were asked to identify as many as applied. The results are summarized in Table 9. Seventy-six percent of library users used the BWC Library because the library usually had what they needed, which implied prior experience. Seventy-five percent used the library because BWC Library staff help me find what I need. Sixty-one percent said that BWC Library staff are friendly. These findings

indicate that the BWC Library staff is perceived as being pleasant and willing to assist users. Forty-seven percent of library users also cited that the BWC Library has needed material which I could not find elsewhere. Twenty eight percent of the library users said that the BWC Library was convenient to work. As mentioned earlier, Division field personnel are distributed across the state and not located in a central facility. Other comments by Division safety professionals about why they used the BWC Library included "best source of information; quick response; fast service; (the library) always comes through for me-whatever the topic or question."

Users were generally satisfied with the BWC Library. Eighty-six percent were very satisfied and 14 percent were somewhat satisfied. No one indicated being dissatisfied with the library as an information provider. All library users would go back to the BWC Library in the future.

Table 9

Reasons For Library Use

| Reason | Count | User Percent % n=83 |
|---|---|---|
| Convenient to my place of work. | 23 | 28% |
| BWC Library usually has what I need. | 63 | 76% |
| BWC Library Staff are friendly. | 51 | 61% |
| BWC Staff members help me find what I need. | 62 | 75% |
| BWC Library has needed materials which I could not find elsewhere. | 39 | 47% |
| I was referred. | 8 | 10% |
| Other | 6 | 7% |

The next set of survey questions was directed at the non-user. They were presented with a list of nine reasons for non-use, plus one "other" category. Non-users were instructed to identify as many reasons for non-use as applied. The results are listed in Table 10. In addition, there was a question that allowed non-users to share their comments on what they did not like about the BWC Library.

Fifty-four percent of the library non-users did not use the BWC Library because of "lack of time." Forty-one percent said that the library's "inconvenient location" was their reason for not using the library. Another 16 percent stated that "inconvenient parking" was why they had not used the BWC Library to

gather information for this one work situation. The BWC Library is located in downtown Columbus, Ohio. Division safety and health professionals work out of their assigned regional office and their homes. This makes it difficult to come in person to the library. Only eight percent of the respondents said that they "do not" need BWC Library materials and/or services. Responses in the "other" category ranged from distance from the regional office; delays in mailing; outdated materials; and timeliness of requested information.

Table 10

Reasons For Non - Use of BWC Library

| Library<br>Reason | Count | Non - Use Percent % n=37 |
|---|---|---|
| Lack of time | 20 | 54% |
| Inconvenient location | 15 | 41% |
| Inconvenient parking | 6 | 16% |
| Cannot find what I need | 0 | 0% |
| What I need is usually checked out | 0 | 0% |
| BWC Library staff are unfriendly | 0 | 0% |
| BWC staff members are not helpful | 0 | 0% |
| I do not need BWC Library materials and/or services. | 3 | 8% |
| Other | 15 | 41% |

Sprague found that 46 percent of OSU staff members did not use University Libraries because they "did not" need them. Chen and Hernon reported similar results--New England residents did not need libraries or did not think libraries could help. This study showed that a majority of Division of Safety and Hygiene's safety professionals did use the library for work projects.

**Conclusion**

This report has discussed the information providers used by Division of Safety and Hygiene occupational safety and health professionals. Their preference for interpersonal providers as well as for convenient print material has been shown in this study. The five most popular choices, personal print materials, staff members, regional office print materials, BWC Library staff, and the BWC Library collection indicated that the safety professional as an information-seeker sought out information providers that were close by and maybe familiar, whether that be a person or print material, and then looked outside her/his immediate area to search for more information. Respondents found that interpersonal providers (e.g. staff members, librarian(s)) were the most helpful as they located information. Over 70 percent stated they had used the most helpful source because of previous experience. This emphasizes the need for library-user interaction to be successful. It also validates the need for the BWC Library to continue its proactive stance to create these initial "prior experiences." They were also highly satisfied with the most helpful providers and would use them again. Although there were more information providers chosen as being least helpful, the respondents were not very dissatisfied with their choices, and would use them for future information needs. Proximity and accessibility was the primary consideration for using the least helpful information provider. Prior experience and happenstance were also important reasons.

Respondents also indicated a clear preference for accurate, current, and understandable information, with little concern about its cost.

Unlike OSU staff members in Sprague's study, Division safety professionals not only used library materials, but choose them as one of the top three most helpful sources. Librarians, BWC Library collections, and database searches were highly ranked by the respondents. Library information sources were seldom described as least helpful either. This study confirms the need to study specific user groups in specific information-need contexts.

Analysis of demographic information shows that, generally speaking, the BWC Library user is relatively young, well educated, and had been employed by the Division of Safety and Hygiene for ten years or less. The BWC Library was used primarily because the library usually had what the person needed. The library staff's helpfulness and friendliness were also important reasons. Library users were extremely satisfied with the BWC Library and all stated they would go back to the library for future information needs.

Unlike the respondents in Sprague's and Chen and Hernon's studies, most individuals in this present study were library users. This report does not corroborate previous findings that the reasons for library non-use were a perceived lack of need to use libraries and ignorance about the extent of service and materials available (Sprague 1990, 64). This report indicates that Division occupational safety and health professionals not only use the BWC Library but are highly satisfied with staff interactions and the quality of information they receive. Non-use appears to be due more to location and accessibility than lack of need.

A primary role of the BWC Library is to support the work-related information needs of Division of Safety and Hygiene staff. Each of the four Division regional offices has library materials purchased and placed in each

office by the library. Online database searches, CD-ROM information products, subject files, and complete research services are provided to Division personnel either by telephone, mail or in person. It appears that the BWC Library is succeeding as an information provider. This does not mean, however that the BWC Library should become complacent. Competing information sources would also like the opportunity to meet the Division's field staff's need for information. This study indicates that accessibility, convenience, and timeliness appear to be major barriers to library usage at this time. The BWC Library may want to explore the areas of information technology and telecommunications in order to improve service delivery. The BWC Library must market its services and deliver a quality information product for it to continue to be recognized as "the best support group within the Division of Safety and Hygiene" as one respondent cited.

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## Appendix I: "Other" Sources of Information

Vertical files (subject files)

Flammable containers

I used an ergonomics technical cite database developed by our interns.

Computer bulletin board services (Compuserve)

"State of the art changes"

Equipment supplier

Prior reports on work on similar projects

Vendor-service personnel in related area

Companies (specific questions); unions

Company provided information (Material Safety Data Sheets)

(Past) Experience

Consulted private consultant (free)

People I was doing project for provided a lot of information

Reader's Guide

Sought research conducted by BWC Library staff

Phoned in a request for information to BWC Library

## Appendix II: Most Helpful Providers: "Other" Reasons for Use

OCOSH Training Center where I go for the latest training information.

Unique type of information

People (are) very experienced.

I'm very confident of co-workers knowledge and credentials.

Others are very experienced in the problem.

(I) have access to (a) wider variety of sources.

Provided variety; most likely up-to-date material.

## Appendix III: Least Helpful Providers: "Other" Reasons for Use

(I) thought individual(s) would be helpful.

(I) attend these (professional) meetings regularly.

It was a trade association. (I) felt they would have (the) specific information I needed.

I wanted another perspective.

I thought I'd find the answer there.

Monthly meetings.

"None of the above"

"Just checking"

It was a reference source.

## Appendix IV: "Other" Reasons for Using the BWC Library

Always come through for me-whatever the topic/question

Can request information by phone and have it delivered to my home.

Another excellent source of information related to my task.

"Quick response"

"Fast service"

"Best source of information"

"Telephone contact"

## Appendix V: Users' Complaints About the BWC Library

Location!

Slow mail service from Central office.

It's not close to my job.

I am unable to think of anything at this particular time.

The topic which I was researching was a current "hot" topic and the library did not have much information on the subject. However, since it is current safety issue there had not been a whole lot written on the subject, and this is not the library's fault.

Nothing specific. Investigation/survey questions were answered with Division of Safety and Hygiene-provided materials (books) faster (time). Information was probably easier understood.

Distance from Regional office.

It is not the library's fault. But... we need to get to Columbus often enough to stop by the library and look things up for ourselves. I NEVER get to Columbus, so I don't have this option and I miss it.

Outdated books.

Parking.

I have been most pleased with the BWC Library.

Not yet.

Not enough staff-have to wait.

Although calling the library requires less work (time) than going to the library I would probably prefer going to the library and selecting the research material myself with the assistance of the librarians. (I don't live near Columbus.)

## Appendix VI: Reasons For Not Using the BWC Library

Most everything I needed for this project was at my disposal in the regional office.

I contacted the source of the question (OSHA).

I did not allocate my time to contact the library. My mistake (this has been corrected).

Easier for me to do it myself.

Information was present in regional office.

It is complicated to use when you are in another region. By the time the information comes back, it is too late.

I had my answering before using the library.

I already had the information within my personal books.

Never used before.

Located in Dayton and work out of office. It's hard to keep in contact over the phone without using too much time.

Failed to check.

I live about 150 miles away.

No one reason; if I worked closer to the library, I would have undoubtedly used it.

I have current reference material(s) at my home.

(I) used my library in our office.

## Appendix VII: Respondents' Comments

I try not to trouble the Library staff unless it is pretty important. The staff has always been helpful. I feel particularly good about the competency of our staff! If the information that I need is available anywhere, I feel confident that the staff will find it. That means a lot when I am going to be on the firing line, testifying in court or giving a talk. I'm grateful for the Library and our staff!

I try not to limit my information sources. The more sources, the better for me.

It would be helpful to periodically check the ANSI standards to assure having the latest (most up-to-date) standard(s) on file.

I would like to make better use of the books available at the BWC Library and through the State Library system. Since I can't visit the BWC Library, I don't know what books are available so (I) usually end up doing a literature search even when the books on that particular subject are in the library. I would like the BWC librarian to also search for books and other materials rather than doing a literature search.

In other situations, the BWC Library has been extremely helpful to me. In hindsight, I should have used their resources for quicker response to my answer. Also my 'decision' was not too major since my length of employment has been short.

Please discontinue mailing Xerox copies of safety magazines to consultants' homes. Mailing to our office would be more appropriate.

Since I am new, I am still in the process of finding our what resources are available to me. In the future I will use the BWC Library more often.

Best support group in BWC, absolutely!

Library services are very good; appreciate the "article" services provided by the table of contents of various journals and publications. This helps keep the "field" people current thus enhancing our consulting services.

I generally uses sources such as Index Medicus, Biological Abstracts, Excerpta Medica, Chemical Abstracts (all printed versions) plus CD-ROMs (and software) like Medline. I have a current literature system to keep me current which includes scanning and using Current Contents and the Federal Register.

Better parking is needed...either assign parking space(s) close to building or relocate the library.

Outline of services provided by/through the library.

I frequently consult OSHA for interpretations of their standards.

Having access to online chemical information is a great asset. Rather than searching a chemical dictionary, several toxicology books, and the LTV booklet, a single call solves the majority of those questions. Online information is also more up-to-date (usually!).

The office (regional) library is provided by the BWC Library.

Excellent service providing necessary information.

Film library and BWC Library should be cross-referenced or work more closely together.

Keep up the great work!

On our job we are given OSHA and state and NEC (National Electric Code) books to get our information. We also have a(n) excellent source of informational books in our (regional) office.

At times the BWC Library has proved very useful to me. I wish I had the time to take full advantage of their fine services on each and every project I undertake.

OSHA office

Library is very good for long term needs; short term difficult as it is in Columbus.

The BWC Library is more than helpful in obtaining anything I or my clients need. It is a helpful organization with or without my help to promote it. We in Ohio are lucky to have its knowledge and assistance.

I would like to have access to an online CD-ROM search terminal for future use (at regional office), if feasible.

It's vital to keep up-to-date with related information to my career field. However, the amount of information required to be read is almost becoming burdensome!

Suggestions: put more reference materials in the regional offices. Provide online search programs in the regional offices.

Generally the BWC Library is a primary source of information for me. In this case, I needed unpublished information, so my primary source was the researcher himself.

Generally when researching, I begin with my home library (Division-issued); then (I) go to regional office library, co-workers, and outside peers. If I still have questions, then I call (the) BWC Library and trade associations or professional associations. This will typically answer all (of) my questions.

I rarely visit the BWC Library. (I live and work 160 miles from Columbus.) I rely very heavily on the BWC librarians when researching. I generally check my personal files first for information, then I check resources at the regional office and canvas my peers. If I cannot find sufficient information from these sources, then I contact the BWC Library by phone.

The Resource Center is an invaluable source information. I especially enjoy receiving the tables of contents for various journals each month.

I think the use of the library should be continually stressed to new employees. Although covered in orientation, details are lost to the memory when bombarded with everything else.

I have used the BWC Library services on a limited basis so far because I am new to this organization. As I become more familiar with my job and the library services I will definitely use these services more. This is a vital resource for my job. Keep up the good work!

When I am able to use the Library (BWC), I do get excellent service and good information. But the lack of accessibility is very convenient.

I am a new employee and (I) approach my co-workers for information more than calling the research staff. Most of the information I need is basic information and I use my personal library much of time.

If online/CD-ROM research capabilities were available at my regional office, I would be much more likely to use it. The problem with asking library personnel to do searches is the lack of flexibility/immediacy. It is a fine service, to be sure! Finally, as you know, my responses are based only one project. Still, something has happened in the last 2 or 3 years which has caused me to be in the library less often. Is it parking? Is it the new building? I really don't think there is one reason. Maybe your survey will jar me into taking better advantage of it (library) in the future.

THE INFORMATION-SEEKING AND USER BEHAVIORS OF OCCUPATIONAL SAFETY AND HEALTH PROFESSIONALS: THE OHIO DIVISION OF SAFETY AND HYGIENE

September 27, 1993

Dear Occupational Safety and Health Professional,

Identifying, comparing, and analyzing how Division of Safety and Hygiene's occupational safety and health professionals obtain their information for work-related needs is the focus of a research project I am asking you to participate in.

I am currently completing a Master of Library and Information Science degree from Kent State University, with one of the degree requirements being a research project. For this project, I am asking Division field personnel to anonymously complete a questionnaire on how you obtain information necessary to answer a work project and your usage of the BWC Library.

Please complete the enclosed questionnaire and return it in the stamped addressed envelope. Your answers will remain confidential and anonymous. The survey should not take more than fifteen minutes to fill out.

The Kent State University Institutional Review Board requires that you be informed of the University's rules for research; please read the information on the reverse of this letter regarding your voluntary participation, and my assurance of your confidentiality.

**Please return the survey by Friday, October 8, 1993.** Thank you for your prompt response.

Sincerely,

James E. Griffin
Librarian/Graduate Student

Enclosures

**BEST COPY AVAILABLE**

"THE INFORMATION-SEEKING AND USER BEHAVIORS
OF OCCUPATIONAL SAFETY AND HEALTH PROFESSIONALS:
THE OHIO DIVISION OF SAFETY AND HYGIENE"

The purpose of this study is to learn more about how Division of Safety and Hygiene field personnel locate, gather, and use information for their work-related needs. As part of my research, you are being asked to complete a questionnaire on how you find the information required to answer a work project and your usage of the BWC Library.

Confidentiality of your answers to the questions in the survey is assured. In order to reduce the costs of follow-up mail, identification numbers will appear on the return envelope. Once the survey has been returned and noted, the envelope will be separated from the questionnaire. Furthermore, the list of identifying numbers and names will be discarded.

Taking part in this research project is completely voluntary. If you start on the questionnaire, you may stop at any point. The questionnaire should only take about fifteen minutes to complete.

If you want to know more about this research project, please call me at (614) 466-0580. You may also call my faculty advisor, Dr. Mary Kim, at (614) 292-7746. The project has been approved by Kent State University. If you have any questions about Kent State University's rules for research, please call Dr. Eugene Wenninger, at (216) 672-2070.

Thank you.

James E. Griffin
Librarian/Graduate Student

## Section I: Methods Used to Obtain Information

The purpose of this survey is to determine how Ohio Division of Safety and Hygiene staff gather information at work.

Think about a **major** decision or planning situation which occurred within the last six months and for which you needed information. Please identify those sources that you used to gather information **in this one situation.** Please respond to each item.

| | Did you? (Circle One) |
|---|---|
| 1. Consult other staff members of the Division. | YES NO |
| 2. Consult colleagues outside the Division. | YES NO |
| 3. Assign responsibility for obtaining information to other staff members. | YES NO |
| 4. Hire a private consultant. | YES NO |
| 5. Consult a librarian. | YES NO |
| 6. Attend conferences, seminars, workshops, etc. | YES NO |
| 7. Attend a professional society or organization. | YES NO |
| 8. Consult your personal books, newspapers, or journals. | YES NO |
| 9. Consult your regional office's books, newspapers or journals. | YES NO |
| 10. Consult books, newspapers, or journals in the BWC Library. | YES NO |
| 11. Search online or CD-ROM databases using terminals or microcomputers outside the BWC Library. | YES NO |
| 12. Request a library search of an online or CD-ROM database. | YES NO |
| 13. Search printed indexing and abstracting tools (i.e. Reader's Guide) to locate books and/or journals. | YES NO |
| 14. Consult the BWC Library's catalog to locate books and/or journals. | YES NO |

15. Other (Please explain)_____

16. Considering the same major situation, which of the above information sources was the most helpful? (Write the number of one information source on the line.)

MOST HELPFUL____

17. Why did you go to the most helpful source? (Circle Only One)

1 YOU WERE REFERRED
2 PRIOR EXPERIENCE OR KNOWLEDGE
3 IT WAS NEARBY AND EASY TO GET TO
4 IT HAPPENED TO BE THERE
5 OTHER_____

18. How satisfied were you with the most helpful source? (Circle Only One)

1 VERY SATISFIED
2 SOMEWHAT SATISFIED
3 SOMEWHAT DISSATISFIED
4 VERY DISSATISFIED

19. Would you go back to the most helpful source for future information needs? (Circle Only One)

1 YES
2 NO

20. Considering the same major situation, which information sources which you used was the least helpful?
(Write the number of one information source on the line)

LEAST HELPFUL_____

21. Why did you go to the least helpful source? (Circle Only One)

1 YOU WERE REFERRED
2 PRIOR KNOWLEDGE OR EXPERIENCE
3 IT WAS NEARBY AND EASY TO GET TO
4 IT JUST HAPPENED TO BE THERE
5 OTHER_____

22. How satisfied were you with the least helpful source? (Circle Only One)

1 VERY SATISFIED
2 SOMEWHAT SATISFIED
3 SOMEWHAT DISSATISFIED
4 VERY DISSATISFIED

23. Would you go back to the least helpful source for future information needs? (Circle Only One)

1 YES
2 NO

## Section II: Use of Information

In Section I, you identified information sources which you used in a specific work situation. Now, we would like you to answer a few questions about your decision to use these sources.

24. As you gathered information in this situation, which of the following five items was **most** important to you? (Circle Only One)

    1 TIME
    2 COST IN MONEY
    3 UP-TO-DATENESS OF INFORMATION
    4 ACCURACY OF THE INFORMATION
    5 UNDERSTANDABILITY OF THE INFORMATION

25. Which was **least** important? (Circle Only One)

    1 TIME
    2 COST IN MONEY
    3 UP-TO-DATENESS OF INFORMATION
    4 ACCURACY OF THE INFORMATION
    5 UNDERSTANDABILITY OF THE INFORMATION

26. As you gathered information for this situation, were you more concerned with the time it took or the cost in money? (Circle Only One)

    1 TIME
    2 COST IN MONEY

27. As you gathered information for this situation, were you more concerned the cost of money or the understandability of the information? (Circle Only One)

    1 COST IN MONEY
    2 UNDERSTANDABILITY

28. As you gathered information for this situation, were you more concerned with time or the understandability of the information? (Circle Only One)

    1 TIME
    2 UNDERSTANDABILITY

## Section III: Use of the Division's Library

In Section I, you identified information sources which you used in a specific work situation. The following questions relate to your use of the BWC Library as an information provider for the **same situation** which you thought of earlier.

29. Did you use the BWC Library materials and/or services in gathering information for this one work situation? (Circle the number of your answer and follow directions to the next question)

1 YES (Go to #30)
2 NO (Go to #34)

30. Why did you use the BWC Library to gather information? (Circle as many as apply)

1 CONVENIENT TO MY PLACE OF WORK
2 BWC LIBRARY USUALLY HAS WHAT I NEED
3 BWC LIBRARY STAFF MEMBERS ARE FRIENDLY
4 BWC LIBRARY STAFF MEMBERS HELP ME FIND WHAT I NEED
5 BWC LIBRARY HAS NEEDED MATERIAL WHICH I COULD NOT FIND ELSEWHERE
6 I WAS REFERRED
7 OTHER (specify)_____
_____

31. How satisfied were you with the BWC Library? (Circle Only One)

1 VERY SATISFIED
2 SOMEWHAT SATISFIED
3 SOMEWHAT DISSATISFIED
4 VERY DISSATISFIED

32. Would you go back to the BWC Library? (Circle Only One)

1 YES
2 NO

33. Was there anything about the BWC Library which you did not like? (Write on lines provided)

_____
_____
_____
_____

Skip #34 and go on to Section IV

34. Why did you not use the BWC Library to gather information? (Circle as many as apply)

1 LACK OF TIME
2 INCONVENIENT LOCATION
3 INCONVENIENT PARKING
4 CANNOT FIND WHAT I NEED
5 WHAT I NEED IS USUALLY CHECKED OUT
6 BWC LIBRARY FREQUENTLY DOES NOT HAVE WHAT I NEED
7 BWC LIBRARY STAFF MEMBERS ARE UNFRIENDLY
8 BWC LIBRARY STAFF MEMBERS ARE NOT HELPFUL
9 I DO NOT NEED THE BWC LIBRARY MATERIALS AND/OR SERVICES
10 OTHER (Specify)_____

**Section IV: Demographic Information**

Finally, we would like to ask you a few questions about you to help interpret the results.

35. What is your present age? (Circle number of your answer)

1 25 AND UNDER YEARS
2 26-35 YEARS
3 36-45 YEARS
4 46-55 YEARS
5 56-65 YEARS
6 OVER 65 YEARS

36. Your sex?

1 FEMALE
2 MALE

37. Which is the highest level of education you have completed?

1 COMPLETED HIGH SCHOOL
2 SOME COLLEGE
3 COMPLETED COLLEGE
4 SOME GRADUATE WORK
5 A GRADUATE DEGREE

38. How many years have you worked at the Division of Safety and Hygiene?

1 5 AND UNDER YEARS
2 6-10 YEARS
3 11-15 YEARS
4 16-20 YEARS
5 21-25 YEARS
6 OVER 25 YEARS

Is there anything else you would like to tell us about how you generally gather information at work? Any other comments which you think may help us understand what Division staff want from the BWC Library will be appreciated, either here or in a separate letter. Your contribution to this research project is greatly appreciated.

Please return completed questionnaire in the enclosed, stamped, self-addressed envelope by **Friday, October 8, 1993** to:

James E. Griffin
BWC Library
30 West Spring Street, L-3
Columbus, OH 43266-0581

Thank you.